



GUIDANCE NOTE ON COST ACCOUNTING STANDARD ON MATERIAL COST (CAS-6)



Issued by

THE INSTITUTE OF COST AND WORKS ACCOUNTANTS OF INDIA

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FOREWORD

Material cost forms part of one of the major elements of cost while arriving at the cost of production. While in the financial reporting it becomes a line item drawn from the direct transactions involving material and represent their summation, in the costing terminology it assumes a different contour which may go beyond the transaction framework. The principles of proper allocation and determination of the cost related to material has been captured in the CAS-6, Cost Accounting Standard on 'Material Cost'. This Standard is also one of the first standards coming under the revised framework in line with International practices. It becomes very important for the Institute to provide detailed guidance to the professionals and others who are involved in computation and analysis of cost.

I am happy to note that the Cost Accounting Standards Board of the Institute is bringing out this Guidance Note on 'Material Cost' which provides the much needed guidance on treatment of material cost.

I wish to place my appreciation for Shri Rakesh Singh, Vice President and Chairman, CASB for bringing out guiding literature for the members.

I am confident that this Guidance Note would help the members and other users to understand and implement the various principles of Cost Accounting Standards on Material Cost.

A handwritten signature in blue ink, which appears to read 'M. Gopalakrishnan'. The signature is fluid and cursive.

(M.Gopalakrishnan)

President, ICWAI

PREFACE



Consequent upon the Notification of The Companies (Cost Accounting Records) Rules, 2011 on 3rd June, 2011, which provides for maintenance of Cost Accounting Records by Companies in accordance with the Generally Accepted Cost Accounting Principles (GACAP) and Cost Accounting Standards issued by the Institute, the need for the Guidance Notes on various Cost Accounting Standards was felt.

I am pleased to present the Guidance Note on the Cost Accounting Standard on Material Cost (CAS-6). This Guidance Note deals with Principles and Methods as provided in the Cost Accounting Standard on Material Cost and practical aspects in connection with the determination of the material cost of a product or service.

I am extremely grateful to Shri S.C. Vasudeva, Member Cost Accounting Standards Board of the Institute for squeezing time out of his other pressing preoccupations to guide the secretariat in finalising this Guidance Note.

I am also thankful to all the members of the Cost Accounting Standards Board of the Institute for discussing the draft of the Guidance Note.

I am thankful to Shri M Gopalakrishnan, President of the Institute for his vision, guidance and support I have received in carrying out the activities of the Cost Accounting Standards Board.

I would also like to place on record the efforts put in by the CASB Secretariat, headed by Shri JP Singh, Director (Technical), for all the initiatives and successful co-ordination in completing this document. I am confident that the Secretariat will come out with more and more Guidance Notes in the near future.

I am confident that this Guidance Note would be well received by the members.

A handwritten signature in blue ink that reads "Rakesh Singh". The signature is written in a cursive style with a long horizontal line extending to the right.

(RAKESH SINGH)

Vice President and Chairman, CASB



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Guidance Note on Cost Accounting Standard on Material Cost (CAS-6)

The Council of the Institute of Cost and Works Accountants of India (ICWAI) has issued the Cost Accounting Standard 6 (CAS-6) on Material Cost which lays down a set of principles and methods of classification, measurement and assignment of material cost, for determination of the cost of product or service and the presentation and disclosure in the cost statements.

CAS-6 does not deal with Packing Materials as a separate Cost Accounting Standard on Packing Material Cost (CAS-9) has been issued on the subject.

The Guidance Note deals with principles and methods as provided in the CAS-6 and practical aspects in connection with the determination of material cost of a product or service.

In the preparation of cost statements including those requiring attestation, material cost shall be determined as per CAS-6. The Cost Accounting Standards have been set in **bold italic** type and reference number of the standard has been retained as in CAS-6 for ready reference.

The Companies (Cost Accounting Records) Rules, 2011 provide that every company, including a foreign company defined under section 591 of the Companies Act, 1956 which is engaged in production, processing, manufacturing or mining activities have to maintain cost accounting records in accordance with the Generally Accepted Cost Accounting principles (GACAP) and Cost Accounting Standards issued by the ICWAI, to the extent these are found to be relevant and applicable. The above Rules further provide that these will be applicable to companies wherein aggregate value of net worth as on the last date of the immediately preceding financial year exceeds five crores of rupees; or wherein the aggregate value of the turnover made by the company from sale or supply of all products or activities during the immediately preceding financial year exceeds twenty crores of rupees; or wherein the company's equity or debt securities are listed or are in the process of listing on any stock exchange whether in India or outside India.

The Companies (Cost Audit Report) Rules, 2011 cast a duty for a Cost Auditor appointed under Section 233B of the Companies Act, 1956 to certify inter alia that books and records maintained by the company are in conformity with the Cost Accounting Standards issued by the ICWAI to the extent these are found to be relevant and applicable.



Chapter 1

Introduction

Materials constitute one of the important elements of production. Types of materials covered under CAS-6 are raw materials, process materials, additives, manufactured / bought out components, sub-assemblies, accessories, semi finished goods, consumable stores, spares and other indirect materials.

Raw Materials:

Raw material is a basic /main material used in the manufacture of product. For example sugar cane is the raw material for production of sugar. Cotton is the raw material for production of cotton yarn.

An illustrative list of industries and raw materials used is annexed at Annexure 1.

Process Materials:

Process materials/additives are materials used in the process of manufacture in addition to raw material. It varies from industry to industry. Process material for sugar industry is lime, sulphur; in cement industry pozallana and gypsum are additive materials; and in paper industry clay/china clay is additive material.

Bought Out Components:

Bought out component means a manufactured (industrial) product, which forms part of the finished product (for example fastener, fan belt and the like) and is fitted to the product without any further processing. In other words bought components are purchased items used in the assembly of main product. These items are developed by the supplier as per specifications of manufacturer. Bought out component when used in the main product are called "Original Equipment Supplies (O.E.S)". These items are also available in the market for replacement of worn out parts and is called as spare /bought out parts.

Sub-assemblies:

"Sub-assembly" (also sometimes called as "aggregates") means an assembly of various components with a distinct identity, and forms part of the finished product, for example engine, steering in an automobile.

"Accessory" may be either a component or sub-assembly, which is not essential for the basic functioning of the product, but supplied as an optional item (for example an air conditioner or music system in an automobile). However, in the case of mining, earthmoving drilling equipment and other similar items of machinery, accessories are supplied with the basic equipment, depending upon the operating conditions in the field as standard equipment.



Consumable Stores:

Consumable stores are items used in the maintenance of plant for example lubricant, cotton waste, paint and the like. Spares are purchased items used for replacement of worn out part of machinery and the like.

Other indirect materials are items of small value such as bolt, nut nails, and the like which cannot be directly identified economically with a product and are treated as indirect material.

Material acquired in exchange of other material:

When material is acquired in exchange for other material or service supplied, the cost of material acquired is taken as cost of material supplied or services provided plus other applicable cost such as freight.

In paper industry where bagasse from sugar mill is obtained by the paper mill by supplying coal to the sugar mills, in the cost statement, the cost of coal supplied is included in the cost of bagasse procured.

All the above items are identifiable with a product and are classified as direct material cost.

Materials are classified under a common designation on the basis of similarities of nature, attribute or relations, source of supply and the like. Materials are classified according to nature such as raw material, consumable stores, spares and the like. In terms of relationship, materials are classified as direct material and indirect material. On the basis of source of supply, materials are classified as indigenous materials / imported materials. Indigenous materials are manufactured within the country and imported materials are purchased from other countries.

For purpose of identification and convenience, each item of material is given a distinct name. Similar items are classified under sub-groups and number of such group is classified under the main or major groups. For example, items of brass may be classified under sub-head 'non-ferrous metals' and under the main head 'metals'.

The objective of the CAS-6 is to bring uniformity and consistency in the principles and methods of determination of cost of material of a product / service. The principles and methods adopted shall be applied consistently from one period to another and for reasonable uniformity between different products / units. For example if FIFO method is used for valuation of issue of materials, the same shall be followed consistently from one period to another.



Chapter 2

Definitions

The following terms are used in this guidance note with the meaning specified.

Abnormal cost: *An unusual or atypical cost whose occurrence is usually irregular and unexpected and/or due to some abnormal situation of the production or operation.*

Administrative overheads: *Expenses in the nature of indirect costs, incurred for general management of an organization.*

Cost Object: *This includes a product, service, cost centre, activity, sub-activity, project, contract, customer or distribution channel or any other unit in relation to which costs are ascertained.*

Defectives: *End Product and/or intermediate product units that do not meet quality standards. This may include reworks or rejects.*

Reworks: *Defectives which can be brought up to the standards by putting in additional resources.*

Rejects: *Defectives which cannot meet the quality standards even after putting in additional resources.*

Imputed Costs: *Hypothetical or notional costs, not involving cash outlay, computed only for the purpose of the decision making.*

Direct Materials: *Materials, the costs of which can be attributed to a cost object in an economically feasible way.*

Indirect Materials: *Materials, the costs of which cannot be directly attributed to a particular cost object.*

Material Cost: *The cost of material of any nature used for the purpose of production of a product or a service.*

Production overheads: *Indirect costs involved in the production process or in rendering service.*



Scrap: *Discarded material having some value in few cases and which is usually either disposed of without further treatment (other than reclamation and handling) or reintroduced into the production process in place of raw material.*

Standard Cost: *A predetermined norm applied as a scale of reference for assessing actual cost, whether these are more or less.*

Waste: *Material loss during production or storage due to various factors such as evaporation, chemical reaction, contamination, unrecoverable residue, shrinkage etc., and discarded material which may or may not have value.*

Spoilage: *Production that does not meet with dimensional or quality standards in such a way that it cannot be rectified economically and is sold for a disposal value. Net Spoilage is the difference between costs accumulated up to the point of rejection and the salvage value.*



Chapter 3

Principles of Measurement

5.1. Principle of valuation of receipt of materials:

5.1.1 The material receipt should be valued at purchase price including duties and taxes, freight inwards, insurance, and other expenditure directly attributable to procurement (net of trade discounts, rebates, taxes and duties refundable or to be credited by the taxing authorities) that can be quantified with reasonable accuracy at the time of acquisition.

The valuation of receipt of materials is to be based on the terms and conditions stated in the purchase order depending upon source of supply i.e. indigenous or imported.

Indigenous Material:

The purchase order inter alia states

- (1) Specification of material being purchased
- (2) Purchase price
- (3) Quantity of supply
- (4) Time of supply
- (5) Place of supply
- (6) Payment terms
- (7) Other commercial conditions regarding inspection, rejection, trade discount and similar item.

If purchase price is ex-works of purchaser, inward freight is inbuilt in the price structure. If purchase price is ex-works of supplier, inward freight is to be paid by the purchaser and it is to be included in the valuation of receipt. Other terms used in this regard are F.O.R destination / F.O.R of supplier's place (F.O.R – means free on rail). If it is F.O.R destination, loading at the place of supplier and railway freight is in built in the material purchase price. Unloading and transportation from railway station to works is to be incurred by the purchaser and is to be charged to the material purchase value. In case of F.O.R supplier's place, railway freight is to the account of purchaser.

In addition to basic purchase price, duties and taxes, freight inwards, insurance and other expenditure directly attributable to procurement are to be taken into account while valuing the receipt if these can be quantified with reasonable accuracy at the time of receipt. If any of these items of expenditure cannot be quantified with reasonable accuracy, these shall be treated as material handling cost. Trade discount, rebates, taxes and duties refundable (or to be



credited by the taxing authorities) are to be set off. Examples of taxes to be deducted from cost are:

- Cenvat Credit
- Countervailing/custom duty credit
- Vat credit
- Any other tax

Illustration on valuation of receipt of indigenous supply is at Annexure II.

The cost of the material is determined as per invoice. If supply of material is ex-works of purchaser, there will be no freight and cartage charges in the invoice. In case inward freight is incurred, it shall form part of the cost of procurement of materials and is to be apportioned to the items purchased on rational basis such as weight / number and the like.

Imported Material:

Following points are to be considered while valuing imported material:

- a) Actual customs duty paid on the basis of classification by the Customs Authorities will be assigned, net of any credits.
- b) Material imported free of duty or at concessional rate of duty under export incentive scheme will be accounted for at the actual rate of duty applicable so long as there is reasonable expectation that the entity will satisfy the conditions for the duty exemption or concession. In case the material is used for a purpose other than the intended purpose, provision for import duty should be made. This entry may be offset when the material is available for export purposes at the imported parity rate of material.
- c) Harbour dues, stevedoring charges, congestion charges, and the like on the basis of actual, if imported singly should be accounted. If imported as part of a basket of other material, then proportionate charges will be allocated on import value.
- d) Intermediate storage – actual charged by the storage provider should form part of the cost of material.
- e) Clearing Agent's Charges will be added to cost of materials. Where other services are also provided by the commission agent besides procurement of orders, for example arranging for LC, the charges for such services will also be assigned to the materials covered on a suitable basis.
- f) Adjustment of CENVAT /VAT as per applicable regulation.
- g) Duty drawback and other similar duties subsequently recovered shall also be deducted from the cost of material.
- h) Bank Charges are in the nature of administrative overheads and will not form part of material cost.



Illustrations on FOB and CIF basis of import of material are at Annexure III a & III b.

Preparatory Cost:

All traceable costs to the extent possible for bringing the material up to the place of manufacture are to be reckoned. This may include preparatory costs in some industries. In case of procurement of cane considerable efforts and resources are involved, which can be directly identified and classified as sugar cane development costs. This would include cost incurred for dressing of sugar cane before crushing and the like. Similarly, in mining industry raw ore undergoes changes through many stages and cost up to each stage is considered separately and added to the next stage cost.

In paper industry bamboo, hardwood, wood waste (Veneer waste, Rulla and the like from Plywood Industry) are used as raw material. Before these materials can be used, various preparatory operations such as cutting, debarking, chipping and screening to make proper size of wood chips are performed to make the material fit for use. This preparatory cost forms part of the raw material cost.

Wood requires seasoning and the cost of cutting, seasoning should be treated as material cost. Seasoning of raw material for wine is another example of preparatory cost.

Handling costs up to works / factory gate:

If handling cost is specific and handled singly, it is to be assigned to the material handled. If employees are used for handling the material, it is to be apportioned on the basis of time taken by them.

Incoming Inspection:

If the material calls for inspection by a third party, specific cost will be assigned to the material inspected. If the Inspection is carried out internally and its cost is significant, it is to be apportioned on the basis of time spent on inspection or other suitable measure of effort. In case the material is supplied by the supplier at his cost and risk with regard to quantity etc, there will be no cost for inspection to the buyer.

Other cost incurred for material acquisition is insuring of material. If insurance premium is specific and insured singly, it is to be assigned to the specific material insured. In case it is part of a comprehensive policy then the assignment of the insurance premium will be on the basis of the proportionate value insured. If insurance becomes part of the carrier's responsibility no separate cost will be assigned in this regard.



Treatment of containers for materials purchased:

Treatment of container cost in the cost of material purchased is as under:

Container is non returnable and for which no cost is charged in the invoice:

The container cost is included in the material cost. An estimated residual value of the container may be reduced for ascertainment of material cost, if sold for some value, from time to time. If the value is not so significant, it may be credited to manufacturing overheads.

Container is returnable, but charged in invoice and refunded, when returned:

As refunds are made, the cost of material will be net of the charge for returnable container. Necessary physical controls will be operative. Containers not returned in time may be charged to the entity. The amount so charged by the supplier should be aggregated with manufacturing overheads.

The cost borne by the entity will only be added to the cost of material. If charged value is Rs 100/- per container and return credit is for Rs 40/-, balance Rs 60/- is the cost to be included in material cost.

Container is charged separately in the invoice and not returnable:

This will be included in material cost.

Container sold as scrap:

The value may be reduced from material cost if material and significant, otherwise sale value of scrap be adjusted against manufacturing overheads.

5.1.2 Finance costs incurred in connection with the acquisition of materials shall not form part of material cost.

Finance costs are interest and the like, on borrowed funds. Finance costs are excluded from cost of material. The letter of credit charges are for credit risk or a transaction risk (demand bill) and are part of bank charges which form part of administrative overheads.

Sometimes goods are kept in bonded warehouse and clearance of goods is delayed. This may happen due to any financial stringency delaying the payment to the bank. Such payments of storage are to be excluded from cost of material calculation and are dealt with in the financial accounts.



5.1.3 Self manufactured materials shall be valued including direct material cost, direct employee cost, direct expenses, factory overheads, share of administrative overheads relating to production but excluding share of other administrative overheads, finance cost and marketing overheads. In case of captive consumption, the valuation shall be in accordance with Cost Accounting Standard 4.

Self manufactured materials include components assemblies and subassemblies, accessories and the like manufactured internally for making the final product. For example, gear box assembly, steering system assemblies and the like are made separately and used in the final product assembly. Many products like TV, Switchgear, Computers and the like have innumerable small components either bought or self manufactured. Self manufactured material used in the assembly of main product are also classified as intermediate products.

Cost of self manufactured material is to be determined taking into account the cost of direct material, direct employee cost, direct expenses, share of factory overhead and share of administrative overheads relating to production. Overheads comprise of indirect materials, indirect employee costs and indirect expenses which are not directly identifiable or allocable to a cost object in an economically feasible way.

The term Factory Overheads, Works Overhead, Production Overheads and Manufacturing Overheads denote the same meaning and are used interchangeably.

Factory Overheads are the indirect costs incurred in the production process or in rendering service. These are used for a type of cost that cannot be directly assigned to a cost centre or product, but can only be apportioned to cost units.

Administrative Overheads are the cost of all activities relating to general management and administration of an organization. These are to be analyzed and distributed between administrative overheads relating to production activities and administrative overheads relating to selling and distribution activities on rational basis. Administrative Overheads relating to production activities will form part of self-manufactured materials.

Self manufactured components, if captively consumed and are subject to levy of excise duty, its valuation is to be determined as per CAS-4.



5.1.4 Spares which are specific to an item of equipment shall not be taken to inventory, but shall be capitalized with the cost of the specific equipment. Cost of capital spares and/or insurance spares, whether procured with the equipment or subsequently, shall be amortised over a period, not exceeding the useful life of the equipment.

The spares which are specific to any equipment procured at the time of purchase are capitalized. The spares are to be depreciated as per the Accounting Policies of the entity. Sometimes, capital spares are not separately invoiced but merged with the cost of equipment supplied. These are depreciated with the cost of machinery over its useful life. It may be charged to cost based on machine hours utilized.

Spares which are termed as insurance spares are stored to meet a contingency such as failure of a critical part in order to have insurance against stoppage of production. Such spares may be used for replacing a defective part. These are special purpose spares specific to a specific machinery or group. These are also to be amortized over the useful life of the machinery.

5.1.5 Normal loss or spoilage of material prior to reaching the factory or at places where the services are provided shall be absorbed in the cost of balance materials net of amounts recoverable from suppliers, insurers, carriers or recoveries from disposal.

Sometimes materials are lost in transit or spoiled. Treatment of such a loss will depend upon the terms and conditions of purchase order. If the purchase order does not specify any level of loss and supplier is responsible to supply good quantity, in such cases, the loss is to be borne by the supplier or the insurer as the case may be.

The normal loss is to be absorbed by the good units. Abnormal loss of material is charged to Profit and Loss Account and does not form part of the cost of material. In case of spoiled material if there is any significant realizable value, loss is to be accounted net of such value.

5.1.6 Losses due to shrinkage or evaporation and gain due to elongation or absorption of moisture etc., before the material is received shall be absorbed in material cost to the extent they are normal, with corresponding adjustment in the quantity.

In case of certain materials before its receipt, losses due to shrinkage /evaporation and gain due to elongation or absorption of moisture arises. An anticipated level for such losses or gains for each type of material is to be predetermined. Unit price of material is reduced or inflated to cover the cost of the normal percentage of loss or gain. An illustration is given below:



1000 units of material X purchased @ Rs 4/- per unit = Rs 4000

Anticipated loss on shrinkage: 4% i.e. 40 units

Receipt will be 960 units and price inflated = Rs 4000/(1000-40 Units) = Rs 4.17 per unit

If there is gain in the quantity, issue rate will be reduced.

Certain materials contain moisture at the time of purchase which may evaporate during summer, thereby losing some weight or moisture may be absorbed during monsoon thereby gaining some weight. One of the methods of dealing with such material is to record the material as dry weight after deducting the moisture percentage which is considered normal. For any variation in moisture, suitable adjustment shall be made to record weight in term of dry weight. Loss in quantity due to excess moisture over the normal percentage will not form part of the material cost.

Illustration showing the treatment of driage loss in sugar industry is at Annexure IV.

5.1.7 The FOREX component of imported material cost shall be converted at the rate on the date of the transaction. Any subsequent change in the exchange rate till payment or otherwise shall not form part of the material cost.

FOREX conversion has to be on the date of transaction. The cost and financial accounts will have the same basis for alignment. The date on which the property in goods passes is adopted as the date of transaction. The difference between the actual payment and the amount taken as material cost of goods received is taken to a separate account to show the exchange rate variations (not becoming part of material cost calculations.)

Illustration on treatment of FOREX component is at Annexure V.

5.1.8 Any demurrage or detention charges, or penalty levied by transport or other authorities shall not form part of the cost of materials.

Demurrage and penalties are levied by the Transporters /Custom Authorities for delay in clearance of wagon/vessel and the like.

Illustrations are:

- Demurrages levied by transporter for not removing goods,
- Penalties for keeping hazardous goods in unauthorized places in transit without proper safeguards.
- Penalties levied by Customs Authorities for delayed clearance.



Demurrage and penalties are abnormal cost and are not part of the material cost. It is charged to Profit & Loss Account.

5.1.9 Subsidy/Grant/Incentive and any such payment received/receivable with respect to any material shall be reduced from cost for ascertainment of the cost of the cost object to which such amounts are related.

Subsidy and grant received should be recognized on a systematic basis. These should be matched with the related cost for which these are intended to compensate. Subsidy received for any material is to be reduced from the material cost.

There can be some subsidy for using materials produced by a specific priority industry or energy saving device and the like. Such subsidy is to be adjusted from the material cost.

Incentives received should be reduced from the material cost of the products in respect of which the incentives are received. There can be some difficulty to match incentive with the cost of production due to possible timing differences between the period of production, and the period of receipt of the incentives. Incentives are sometimes recorded on the basis of receipt. In such a situation matching becomes difficult. It will be desirable that accounting entries relating to incentives are passed on accrual basis to reflect the true and fair position of the cost of the product in the cost statements.

5.2. Principle of valuation of issue of material

5.2.1 Issues shall be valued using appropriate assumptions on cost flow.

The CAS-6 provides for adopting any of the following three methods for valuation of issues of material:

- a) First in First out (FIFO)
- b) Last in First out (LIFO)
- c) Weighted Average Rate

Method of valuation of issue of material once adopted shall be followed consistently. If method of valuation is changed, its impact on costs of material shall be disclosed.

The FIFO formula assumes a cost flow that the items of materials that were purchased or produced first are issued first, while LIFO assumes the exactly opposite cost flow charging the current price to cost. Under the weighted average cost formula, the cost of each item is



determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased or produced during the period. The average may be calculated on a periodic basis, or as each fresh shipment is received.

Accounting Standard AS-2 provides for cost formulae, viz. Specific identification, FIFO (First-in-First-out) and Weighted Average cost method. Most of the organizations are adopting one of above cost formulae for the purpose. If any other cost formula is adopted, the difference between financial accounts and cost accounts shall be disclosed in the reconciliation of profit as per cost records and the financial accounts.

LIFO method can be gainfully applied while estimating /projection of cost as it reflects current price cost.

Illustration on FIFO/LIFO/Weighted average method of issue of material is at Annexure VI.

Any accepted method of pricing of issue may be used. However, whatever method of pricing is adopted, the same should be specified and followed consistently.

In case of some bulky/volumetric materials such as coal, limestone, gypsum, salt, slag and the like, it is not always possible to weigh the same and therefore the quantities of receipts and issues of materials are mostly determined by volumetric measurements. Such volumetric measurements are also validated by the actual weight of the stocks at random from time to time. However, it is necessary to check the stock of materials regularly and if any variation in the book stock and physical stock is found, the method of adjustment of such shortage shall be identified with the relevant product(s). Normally, adjustment in the variation of the book stocks and physical stocks are accounted in consumption of such material because of the approximation involved in the receipt and issue of the same.

Another material which requires special mention is petroleum product when issued for further processing. For example Fuel oil is supplied in KL (volume) and its price is also in terms of Rs/KL. This price is related to at a volume measured at 29.5⁰ C (All India ambient temperature) and a temperature variance allowance is given if the item is considered at a higher temperature at the time of issue, particularly bulk loading.



5.2.2 Where materials are accounted at standard cost, the price variances related to materials shall be treated as part of material cost.

The standard cost serves as a basis of cost control and as a measure of productive efficiency when ultimately posed with an actual cost. It provides management with a medium by which the effectiveness of current results is measured and responsibility for deviation is placed. Standard costs are used to compare the actual costs with the standard cost with a view to determine the variances, if any, and analyse the causes of variances and take proper measure to control them. In some process industries like refractory, pharma, formulations and the like, standard mix of raw materials is used to determine the cost of material and variance between standards and actual is adjusted periodically.

Standard Price Method can also be applied for valuation of issue of material. In this method price of issues is predetermined for a stated period taking into account all the factors affecting price such as anticipated market trends, transportation charges and normal quantity of purchase. Standard prices are determined for each material and material requisitions are valued at standard price irrespective of the actual purchase price. Any difference between the standard and actual prices of purchase results in material price variance. The material price variance is to be treated as part of material cost.

When standard costing system is in vogue, there can be other variances relating to usage during the course of production which may be due to normal or abnormal reasons. Variances due to normal reasons should be treated as cost, while the variances due to abnormal / reasons are treated outside the cost of production.

Illustration of material cost variance (price, use, mix and yield) is at Annexure VII.

The variance account enables management to observe the extent to which actual materials costs are differing from planned objectives or predetermined estimates.

5.2.3 Any abnormal cost shall be excluded from the material cost.

Abnormal cost is not considered in the cost of production and excluded from cost of material. The rationale of exclusion is that inclusion of such items in the cost will make the cost not comparable with a normal situation. Such an aberration is avoided to understand the cost in a better perspective for any purpose. For instance, the cost of material cannot be loaded with losses due to an earthquake which is an abnormal event. Similarly, loss of production due to



major fire accident or a major shutdown due to sudden and long machine breakdown for days together for want of a special part may be treated as Abnormal Cost.

Material lost due to major fire accident, burglary, obsolescence, if significant, material and quantifiable shall not form part of cost of the production as not to distort the cost due to abnormal reasons. It is dealt with in the costing Profit and Loss Account.

5.2.4 Wherever, material costs include transportation costs, determination of costs of transportation shall be governed by CAS 5 – Cost Accounting Standard on Determination of Average (Equalized) Cost of Transportation.

Inward freight shall form the part of the cost of material. In case inward freight charges are indicated in the invoice, which is for more than one material, inward freight shall be allocated to different materials indicated in the invoice on reasonable and appropriate basis such as weight, volume, numbers and the like.

If the material is carried by a special carrier, it will be assigned to the specific material transported.

5.2.5 Material cost may include imputed costs not considered in financial accounts.

In economics, 'imputed' indicates an ascribed or estimated value when there is no criteria of absolute monetary value for such purpose. In national income estimation, wages of housewives are imputed. Similarly, in farming operations, the wages or salaries of owner are imputed. Imputed costs are similar to opportunity costs. Interest on internally generated fund, not actually paid is an example of imputed cost for a project evaluation.

As such there is an imputed cost in all the resources of a business if they are applied to another profitable activity. For example in caustic soda plant hydrogen is produced as by product. If the unit has a captive power plant, it is used as fuel. Its cost is to be imputed based on the fuel substituted such as coal/ furnace oil, based on equivalent calorific value.

5.3 Self manufactured components and sub-assemblies shall be valued including direct material cost, direct employee cost, direct expenses, factory overheads, share of administrative overheads relating to production but excluding share of other administrative overheads, finance cost and marketing overheads. In case of captive consumption, the valuation shall be in accordance with Cost Accounting Standard 4.



Self manufactured components are valued at cost including production overheads. This is dealt with under standard 5.1.3 of the Standard.

5.4 The material cost of normal scrap/ defectives which are rejects shall be included in the material cost of goods manufactured. The material cost of actual scrap / defectives, not exceeding the normal shall be adjusted in the material cost of good production. Material Cost of abnormal scrap /defectives should not be included in material cost but treated as loss after giving credit to the realisable value of such scrap/ defectives.

Scrap results from the processing of material. It is unavoidable residue material arising in the process of manufacture. It may have some value. Example of scrap is border material from stamping, shavings, filing, boring, turning operations and the like. The scrap is accumulated in storage yard so that it can be sold to scrap dealers.

In some cases scrap can be reprocessed into useful raw material for subsequent production of basic products. For example the scrap material from sheets of metal from which parts have been stamped, may be melted and again formed into sheets from which more units may be stamped. Similarly scrap generated in steel foundry is put into furnace to melt and form steel castings. Another example is runners and risers generated in the course of dressing up of castings in foundry. Runners and risers are valued at weighted average cost at pouring stage (i.e. raw material cost plus conversion cost of molten metal). The material cost of abnormal scrap will not form part of the material cost.

Normal scrap generated during process of manufacture is to be treated as a part of material cost. Scrap have generally low recovery value as in the case of steel but it may have significant value as in the case of gold. Thus its recovery value depends upon the type of material. There are several methods of accounting of scrap as detailed below:

1. Scrap sales credited to revenue
2. Scrap sales credited to production overhead
3. Scrap identifiable with a job, and its realizable value is credited to the job.

Defective /Spoiled material arises when the material does not meet the exact specification of the material required. Normal Defective/spoilage of material is to be absorbed by good production and abnormal spoilage is to be charged to Profit and Loss Account.

For example:

Metal poured, due to time lost in pouring, is incomplete on account of loss of temperature. This has to be disposed off as such by re-melting or sold as scrap.



In certain types of processes and operations, some material physically disappears on account of shrinkage, evaporation and the like with the result that the quantity of output is less than the quantity of input. In other cases residue such as smoke, dust, gases, slag and the like arises in the course of operation and has practically no measureable value or utility. In some cases, disposal of waste results in further cost to comply with regulatory requirements. In some cases waste may have value.



Chapter 4

Assignment of Cost

6.1 Assignment of costs – Materials

6.1.1 Assignment of material costs to cost objects: *Material costs shall be directly traced to a Cost object to the extent it is economically feasible and /or shall be assigned to the cost object on the basis of material quantity consumed or similar identifiable measure and valued as per the principles laid under Paragraph 5.*

Assignment of material cost involves establishing a suitable procedure to identify and record the resources consumed by the cost object.

Cost Object or Cost Centre is the logical sub-unit for accumulation of cost. Cost Centre may be classified in different ways like function-wise and nature wise:

Function wise	Production / Process Cost Centres: for example Machine Shop, Welding shop, Assembly shop and the like. Service Cost Centre: for rendering service to Power house, Maintenance, stores and the like.
Nature wise	Personal: for example Works manager, maintenance crew. Impersonal: for example machine shop.

Cost Object may be any customer, product service, contract, project, activity or other work unit for which a separate cost measurement is desired. For example, if it is desired to determine what it costs to produce a car, then the cost object is car. If it is desired to determine the operating cost of maintenance department within a plant, the cost object is maintenance department.

Different costs can be assigned to the same cost object, depending on the purpose. For example, costs from all parts of the value chain may be assigned to a product for pricing decisions. The direct cost of one cost object may be the indirect cost of another cost object.

For assigning direct material cost to a cost object, the source document is material requisition. Details of material issued for manufacturing a cost object/ product are recorded in it. It records the job number, type of material, and items listed are priced as per the method of valuation adopted for issues. Thus material requisition represents the source of information for assigning the cost of material to cost object.



The quantity of material consumed is to be worked out from material issue records of stores for a product and return of unused material, if any. Such consumption in quantity may be derived by two methods.

Method (i): Based on actual issues for batch, unit or job:

This method is preferred as it establishes direct relationship of actual material usage for the product.

Method (ii): Based on any method other than actual, for example, Standard:

Under this method material is issued as Standard Bill of material. The standard cost for each direct material is defined at the beginning of the year. The variances from standard on account of price / consumption and the like are adjusted to consumption at the year end. Some organizations follow “Back flush Costing” system. It eliminates detailed accounting transaction. It focuses first on the output of the organization and then works backwards when allocating cost between goods sold and inventories. As soon as a finished good is ready for stock, material is Back flushed (issued) as per the bill of material for that product. Any variation between the actual issues (both quantity and value) and the standard as accumulated over the period is charged off to consumption.

Standard Bill of material method is to be used in case of goods, where the direct link of actual consumption for product is not available. The manufacturer using this method should certify the quantitative requirement considered for calculation of material consumption as per Bill of Material. It may be ensured that usage variance is within reasonable limit and it should be adjusted in calculation of cost of production.

For tracing of material cost direct to a cost object, concept of “to the extent economically feasible” is also to be taken into account. This requires an exercise to analyse the cost involved, benefit to accrue and over-riding requirement to identify material with the object. In other words material cost if not directly identified with the cost object on economic feasibility consideration, it shall not result in misstatement of material cost of cost object.

It is advisable to reconcile the cost of the material consumed as per cost records is reconciled with financial books. For major direct materials, reconciliation is to be ensured both in quantity and value.

6.1.2 Where the material costs are not directly traceable to the cost object, these may be assigned on a suitable basis like technical estimates.



Materials which are not directly traceable to cost object, are to be assigned on some rational basis consistently. Technical estimates help in arriving at such rational basis. For Example, Grease or lubricants used for maintenance work may be consumed by all the departments. It may not be economical to issue individual requisition to charge each time. It may be decided to take the total consumption per month and divide the cost between all the user cost centres based on a technical estimate on a sample survey of usage during a selected period. Such studies may be reviewed periodically to correct for changes taking place affecting the consumption.

6.2 Assignment of costs – Direct Expenses

6.2.1 Where a material is processed or part manufactured by a third party according to specifications provided by the buyer, the processing/ manufacturing charges payable to the third party shall be treated as part of the material cost.

It relates to a production operation outsourced. The material undergoes change and enters the work in process stage or semi finished goods stage. A part of the production operation is outsourced. The outsourcing charges paid to third party is treated as part of material cost.

Example (1): Casting requires trimming, machining and polishing, heat treatment after pouring and the like. One of these operations is subcontracted. The activity subcontracted and its cost is part of the material cost.

Example (2): A metal sheet is given to another unit for conversion into specific measurement for use in a press; the material cost is increased to take care of the change in shape done before using in production. Such cost is part of the material cost, as the material is made fit for the operation.

6.2.2 Wherever part of the manufacturing operations / activity is subcontracted, the subcontract charges related to materials shall be treated as direct expenses and assigned directly to the cost object.

This provision covers a situation where the manufacturer gets part of the manufacturing operation subcontracted. For example steel strip is sent to slitter for smaller size, slitting charges paid to subcontractor is to be treated as direct expenses and assigned directly to cost object.



6.3 Assignment of costs– Indirect materials

6.3.1 *The cost of indirect materials shall be assigned to the various Cost objects based on a suitable basis such as actual usage or technical norms or a similar identifiable measure.*

The cost of indirect materials shall be directly assigned to the cost centre where possible under suitable heads as may be economical to aggregate and report under heads like lubricants, tools, consumable stores (building stores, mechanical stores and electrical stores) spares and the like. All the costs under different heads for the cost centres aggregated and accumulated shall be distributed to the production cost centres on a rational basis.

6.3.2 *The cost of materials like catalysts, dies, tools, moulds, patterns etc., which are relatable to production over a period of time shall be amortized over the production units benefited by such cost.*

Indirect materials like cost of catalysts, dies, tools, patterns and the like have longer service life. Some special patterns are charged to the cost of the specific jobs and such indirect materials shall be amortized over the production units benefited by such cost.

In a steel plant, indirect materials like refractory, rolls and other process materials are in the nature of catalysts and their useful life is determined by many parameters like production, quality, metallurgical requirement and many other techno operational parameters. In such cases these may be charged off as and when issued for consumption.

6.3.3 *The cost of indirect material with life exceeding one year shall be included in cost over the useful life of the material.*

It gives a general principle where the life of any indirect material is estimated beyond a year, (life of the material should be estimated on technical basis) to amortise its cost over the estimated life.



Chapter 5

Presentation

7.1 Direct Materials shall be classified in the cost statement under suitable heads.

Cost Statements shall depict Direct Material costs as detailed below:

- a. Raw materials,
- b. Components,
- c. Semi finished goods and
- d. Sub-assemblies

7.2 Direct Materials shall be classified as Purchased - indigenous, imported and self manufactured.

Direct Materials should be presented in the Cost statement by types of material - raw material, components, semi-finished goods and sub-assemblies. It further specifies classification of material on the basis of source of supply viz. indigenous, imported and self manufactured. For example raw material used may be indigenous, imported material or self manufactured. Raw Material cost is to be indicated separately for indigenous and imported raw material consumed. This requirement of presentation by source wise also applies to other types of material viz. components, semi-finished and sub-assemblies also. In process industry direct material is classified as raw material, additives / filler, process chemicals and dyes.

Illustration of the manner in which material cost should be presented is in Annexure VIII a to VIII c.

7.3 Indirect Materials shall be classified in the cost statement under suitable heads.

Indirect material consumed should be grouped under major heads like tools, stores and machinery spares, jigs and fixtures, consumable stores, and the like. These items are to be presented in the cost statement under the above broad groups, if they are significant.



Chapter 6

Disclosures

The following information should be disclosed in the cost statements dealing with determination of material cost.

8.1 Quantity and rates of major items of materials shall be disclosed. Major items are defined as those who form 5% of cost of materials.

Major items of raw materials indicating quantity and rates are to be disclosed in the cost statement which constitutes more than 5% of the total cost of materials. An item of cost is considered as major and significant if that item forms at least 5% of the total cost of materials. Criteria of 5% of disclosure of material has been prescribed taking into account total items to be disclosed in the cost statement shall not exceed 20 items. For instance, imported direct materials is say 4% of the total direct material cost, it is not material and significant to warrant a separate disclosure. Significant items should be classified and disclosed separately while the other items could be aggregated.

Illustrations of presentation and disclosure of material cost under major items for Engineering industry and Process industry are Annexure VIII a, VIII b and VIII c.

In the *Annexure VIII b*, Process Industry, Material Broke, Filler, sizing, alum dyes has been indicated separately which are individually less than 5% of the total material cost, but considering their significance these items have been presented and disclosed separately. Other chemicals which were not significant have been grouped under item B-5 of the above Annexure.

Each major item of material which forms 5% of the cost of materials is considered material and should be disclosed in the cost statement; whereas items below 5% of the cost of materials should be aggregated preferably under respective classification of materials. If any item of material is less than 5% of the total cost of materials, and warrants a separate disclosure due to its significance / nature, same shall be disclosed separately.

8.2 The basis of valuation of materials shall be disclosed.

The standard provides various methods of valuation of issues of material such as FIFO/ LIFO/ Weighted Average. Method adopted for valuation of material cost shall be disclosed in the cost statement.



Example

Periodic quarterly Weighted Average is used for pricing the issues of material. In the Cost accounting records, all major and significant items are included in the direct materials identified with the product. Direct materials forming more than 5 % of the total material cost have been separately classified. Items forming less than 5 % of the total material cost have been suitably grouped and shown under others direct material. Components which are individually small but collectively form more than 5 % of the material cost are classified as components. Direct materials constitute 75 % of the total material cost.

8.3 Any change in the cost accounting principles and methods applied for the determination of the material cost during the period covered by the cost statement which has a material effect on the cost of the material shall be disclosed. Where the effect of such change is not ascertainable wholly or partly, the fact shall be indicated.

The cost accounting principles and methods adopted for determining the material cost is to be followed consistently from one period to subsequent period. If there is any change in the cost accounting principles and methods during the period resulting in material effect on the cost, the same shall be disclosed indicating its impact in the cost statement.

8.4 Any abnormal cost excluded from the material cost shall be disclosed.

Abnormal cost arises due to idle time for some heavy break-down or abnormal process loss. They are not considered in the cost of production and charged to Profit & Loss Account.

Materials lost / damaged due to fire and natural calamities which are not considered fit for use are examples of abnormal cost, hence excluded from cost of material.

Example:

Abnormal cost of Rs. 3 lacs has been excluded in calculating the material cost. This cost is considered abnormal due to a fire accident which took place on 12.02.20XX due to which materials issued for production was lost. The loss of material has been assessed by a surveyor. As the position of allowable claim has not yet been ascertained no credit has been taken for claims recoverable.

8.5 Any demurrage or detention charges, penalty levied by transport or other authorities excluded from the material cost shall be disclosed.



As discussed in earlier para, any demurrage, detention, penalty is to be excluded from material cost.

Example

Demurrage of Rs 6.5 lacs have been paid to the Railways in view of the delay in clearing the goods. This was an exceptional cost due to heavy rains and non availability of cranes for moving the goods.

8.6 Any Subsidy / Grant / Incentive or any such payment reduced from material cost shall be disclosed.

Any subsidy / grant / incentive received relating to materials is to be reduced from the cost of materials and disclosure made accordingly. The State Government has been subsidizing the transport cost of moving the goods in view of the location for a period of five years. Such subsidies received and receivable are reduced from transport cost of the materials specified by the Government.

8.7 Cost of Materials procured from related parties shall be disclosed.

If any material is procured from related parties, (as defined under the Companies Act, 1956) its relationship, nature of transaction viz. quantity, rate, other terms / conditions of procurement are to be disclosed. The objective of disclosure is to ascertain that the transaction is at arm's length and on purely commercial terms.

Example:

Related party → XYZ Ltd

Nature of relationship → Company and associates own 51 percent of their Equity.

Nature of transactions: XYZ Ltd supplies the engines for the assembly of equipments manufactured by the Company. The engines are specially designed for this purpose and engines of four specific hp are supplied. There are no other parties supplying similar engines.

Volume of transaction: During this year 2500 engines valuing Rs 215 lacs were supplied by XYZ Ltd. Of these, 2200 engines valuing Rs 198 lacs were consumed and they are shown under the bought out components in the direct material cost in the cost statement. The price fixed is based on the assessable value for Excise duty plus 10 % mark-up on that. This valuation has been consistent and considered as reasonable by the management.

There are no other related party transaction relating to purchase of material.



8.8 Any cost imputed in arriving at the material cost shall be disclosed.

As defined in the standard, imputed cost is a notional cost. It does not involve any cash outlay. It is computed only for the purpose of decision making. If any cost is imputed in arriving at material cost, it is to be disclosed to provide information that there is no cash outlay and it is only for decision making.

For example:

In the production of caustic soda, Hydrogen is produced as by-product. It is used as fuel to be burnt in the boiler besides sales. For the quantity burnt as fuel, hydrogen is priced after converting the quantity to thermal equivalent quantity of LSD oil and valued at the price of the LSD Oil.

8.9 Disclosures shall be made only where significant, material and quantifiable.

Standard provides that any item of materials forming 5% of the total cost of material is to be disclosed both in quantity, rate and value. Further materiality and significance of information depends on nature, size and complexity of manufacturing operation. An item of material for use in the production of a product may have significance considering the nature of the product. For example, a critical part has been imported under export incentive scheme. It is to be used in the products to be exported. Though its value is less than 5% of the total cost of material, it is to be disclosed in terms of export requirement. Hence it is significant in the context of cost statement. Materiality is to be judged in terms of quantity and nature of material and in particular context of its omission. Information is material, if its non-disclosure could influence the decision of the user.

8.10 Disclosures may be made in the body of the Cost statement or as a footnote or as a separate schedule.

Disclosures may be made in the body of the cost statement as foot note. If there are many items of disclosures, the same may be included in Schedule of Notes to the cost statement.



Annexure I

Illustrative list of industries and raw materials used

S.No.	Description	Names of important raw materials
1	Sugar	Sugarcane and/or Beetroot
2	Milk powder	Whole fresh milk/skimmed milk as the case may be
3	Tea	Green Tea leaves
4	Motor Spirit	Crude Oil
5	Diesel oil	Crude Oil
6	Furnace Oil	Crude oil
7	Bitumen	Crude oil/coal
8	Soda Ash	Common salt
9	Caustic soda	Common salt
10	Sodium silicate	Soda Ash and Soluble glass
11	Sulphuric acid	Sulphur and/pyrite
12	Urea	Raw naphtha/ammonia/lignite/coal
13	Rayon and Synthetic Fibre & Yarn	Wood pulp/staple fibre
14	Cotton Yarn	Cotton
15	Wollen Fabrics	Woollen Yarns
16	Cement	Lime stone and gypsum
17	Zinc	Zinc ore
18	Aerated water	Concentrate
19	Coffee powder	Coffee beans
20	Gear, Pinion, shaft	Rough forging for such items



Annexure II

Illustration on valuation of receipt of indigenous supply

XYZ co Faridabad Inv.No.KKM/29[2009 To M/s KLM,Nioda			
Item	Quantity Nos	Rate Rs/Unit	Amount (Rs.)
1.Bottom Cap	2200	2.79	6138
2.Top Cap	2200	2.26	4972
Total Assessable value			11110
Excise Duty		8%	889
Education Cess		2%	18
Secondary and Higher Education Cess		1%	9
Taxable Value			12026
Vat		4%	481
Freight & Cartage			0
Total			12507

Accounting entries in regard to above procurement will be as under:

Accounting Entries	Amount (Rs.)		
Purchases – Material	Dr	11110	
Basic Excise Duty Receivable A/c	Dr	889	
Education Cess Receivable A/c	Dr	18	
Secondary and Higher Education Cess Receivable A/c	Dr	9	
Vat recoverable	Dr	481	
To Supplier	Cr		12507
On Payment			
Supplier	Dr	12507	
To Bank	Cr		12507

On manufacture, excise duty payable will be adjusted against the above account viz. Excise Duty payable will be debited and Basic Excise Duty receivable account will be credited to discharge the payment liability of excise.



In certain purchases there may be no excise duty and the like and only VAT is paid. Entry will be in regard to purchase price and VAT paid will be adjusted against VAT payment liability.

VAT is a state subject. Provisions, rules and regulations governing this tax differ from state to state. A registered dealer can set-off VAT paid on inputs such as raw-materials and other supplies, (VAT credit) against VAT payable on outputs such as finished goods or traded goods (Vat liability). The underlying principle is similar to, CENVAT Scheme. In certain situation VAT credit is not available. These include:

- Dealers who are not registered under VAT.
- Dealers having a turnover below the threshold limit as fixed under the State Laws on VAT.
- Dealers engaged in works contract and option to pay tax by way of composition.
- Purchase of goods from unregistered dealers.
- Goods purchased in the course of inter-state trade where VAT is disallowed.



Annexure III a

Landed Cost of imported material on FOB Basis

Calculation of landed cost of Imported material on FOB Basis				
Party's name	XYZ			
Invoice No.	49			
MRR Date	15.9.2009			
LC/TT No.	XXX			
FOB/CIF	FOB			
Bill of Entry No. and date	XXX dated 8.10.2009			
Item	Qty (Kg)	Rate per unit	Bill Value	(\$ = Rs 50.55)
P .Black	10800	\$3.00	\$ 32,400	1637820
			Amount(Rs.)	
a. Assessable value B/E (101% of value)			1654198	
b. Basic Custom Duty (BCD)	7.50%		124065	
c. Education Cess on BCD	2%		2481	
d. Secondary and Higher Education Cess on BCD	1%		1241	
e. CVD (on AV+BCD)	8%		142261	
f. Education Cess on CVD	2%		2845	
g. Secondary and Higher Education Cess on CVD	1%		1423	
h. Custom Edn cess (CVD+EC)	2%		2902	
i. Custom Higher Edn cess(CVD+EC)	1%		1451	
j. Special Addl. Duty (on a to i)	4%		77315	
TOTAL CUSTOM DUTY				355984
Other duty, if any				
Freight				23751
Insurance				124035
Clearing & Forwarding expenses				6801
Total Purchase value	10800 kg			2148391
Less CVD			142261	
Less Education Cess on CVD			2845	
Less Secondary and Higher Education Cess on CVD			1423	
Less Special Addl.Duty**			77315	(-)223844
Net Purchase Value				1924547
**applicable to manufacturer only and not service provider				
Landed Cost per unit				178



Annexure III b

Landed Cost of imported material on CIF Basis

Calculation of landed cost of Imported material on CIF Basis				
Party's name	XYZ			
Invoice No.	49			
MRR Date	5 th April, 2009			
LC/TT No.	XXX			
FOB/CIF	CIF			
Bill of Entry No. and date	XXX Dated			
Item	Qty (Kgs)	Rate per unit	Bill Value \$	(\$ = Rs 51.15)
H Melt	300	\$ 7.70	\$2310	118157
			Amount (Rs.)	
Assessable value B/E(101% of value)			119338	
Basic Custom Duty	20.00%		23868	
Education cess on BCD	2%		477	
Secondary and Higher Education cess on BCD	1%		239	
CVD (on AV +BCD)	8%		11456	
Education cess on CVD	2%		229	
Secondary and Higher Education Cess on CVD	1%		115	
Education cess on Custom (CVD + EC)	2%		234	
Secondary and Higher Education Cess on Custom	1%		117	
Special Addl. Duty	4%		6243	
TOTAL CUSTOM DUTY				42978
Freight				0
Insurance				0
Clearing & Forwarding expenses				5530
Total Purchase value	300kg			166665
Less CVD			11456	
Less Education Cess on CVD			229	
Less Secondary and Higher Education Cess on CVD			115	
Less Special Addl. Duty			6243	(-)18043
Net Purchase Value				148622
Landed Cost per unit	300 KG			495



Annexure IV

Illustration showing the treatment of driage loss in sugar industry

		Quantity (Tonnes)			
	Sugarcane	Purchased	Received	Loss	% of loss
(a)	Own farm	0	0	0	0
(b)	Gate	609073	609073	0	0
(c)	Road	362593	360548	2045	0.564
(d)	Rail	0	0	0	0
(e)	Other means of transport	0	0	0	0
		971666	969621	2045	0.210
	Particulars	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	Total sugarcane purchased incl. from own farm	MT	971666		
	Less--normal losses such as driage	MT	2045		
	Actual	MT	969621	555.522	538645797
2	Commission paid			17.193	16670694
3	Other expenditure at cane collecting Center				
	(a) Salaries and wags			7.257	7036539
	(b) Stores and stationery			1.128	1093732
	(c) Repairs and maintenance			0.609	590499
	(d) Other expenses			3.187	3090182
4	loading and unloading charges			3.922	3802853
5	Net harvesting charges			0	0
6	Taxes and levies				
	(a)Cane cess /purchases tax			17.537	17004243
	(b) Octroi			0	0
	(c) Other levies			0	0
	Total	MT	969621	606.355	587934541
7	Transport charges				
	(a) Transport cost			0	0
	(b) Others			12.765	12377212
8	Cane development expenses				
	(a) Salaries and wages of cane dev. Staff			1.429	1385588
	(b) Others			2.378	2305758
	Total	MT	969621	622.927	604003100
9	Stock Adjustment if any				
	Add- opening stock	MT	156	476.692	74364
	less- closing stock	MT	294	584.844	171944
10	TOTAL	MT	969483		603905520



Annexure V

Illustration on treatment of FOREX component

XYZ imported Quantity 5000 kilos @ US \$ 30 per kilo.
Total contracted rate US \$ 150000 CIF Chennai
Letter of credit established demand bill basis documents against payment.

Date of dispatch of goods 1st Dec XXXX.
(Conversion rate per US Dollar = Rs 44) Market rate published by RBI,
Date of dispatch of Documents 2nd Dec XXXX (Rs 45 per \$ as per market rate published by RBI)
Date of receipt of Documents 6th Dec XXXX (Rs 43 per \$)

Date of payment by the Bank 8th Dec XXXX (Rs 42 per \$ used by the Bank in India)
The cost of materials will be taken @ Rs 45 per US\$ being the date of dispatch of documents. The rate used by their bank for debit is the market rate at the time of conversion within a day which need not tally with the published rate.

The difference between Rs 45 and Rs 42 per \$ will be considered in financial accounts as under:

US \$ 150000 @ 45 per \$ = Rs. 6750000
US \$ 150000 @ 42 per \$ = Rs 6300000

The short / (gain) of Rs 450000 will be credited to exchange rate fluctuations / adjustment account. It does not form part of material cost.

The bank charges are in the nature of Administrative Overheads and will not form part of material cost.



Annexure VI

Illustration on FIFO/LIFO/Weighted average method of issue of material

The following is the receipts and issues of January 2009:

Date	Receipts		Date	Issue (Qty)
	Units(tonnes)	Rupees/unit		
2-1-2009	300	4	7-1-2009	200
16-1-2009	500	6	18-1-2009	400
23-1-2009	450	5	29-1-2009	100

FIFO method:

Receipt				Issue			Balance		
Date	Qty	Rate (Rs)	Amt (Rs)	Qty	Rate (Rs)	Amt (Rs)	Qty	Rate (Rs)	Amt (Rs)
1-1-09							-	-	-
2-1-09	300	4	1200				300	4	1200
7-1-09				200	4	800	100	4	400
16-1-09	500	6	3000				100	4	400
							500	6	3000
							600		3400
18-1-09				100	4	400	200	6	1200
				300	6	1800			
23-1-09	450	5	2250				200	6	1200
							450	5	2250
							650		3450
29-1-09				100	6	600	100	6	600
							450	5	2250
							550		2850



LIFO method:

Date	Receipt			Issue			Balance		
	Qty	Rate(Rs)	Amt(Rs)	Qty	Rate(Rs)	Amt(Rs)	Qty	Rate(Rs)	Amt(Rs)
1-1-09							-	-	-
2-1-09	300	4	1200				300	4	1200
7-1-09				200	4	800	100	4	400
16-1-09	500	6	3000				100	4	400
							500	6	3000
							600		3400
18-1-09				400	6	2400	100	4	400
							100	6	600
							200		1000
23-1-09	450	5	2250				100	4	400
							100	6	600
							450	5	2250
							650		3250
29-1-09				100	5	500	100	4	400
							100	6	600
							350	5	1750
							550		2750

Weighted average method:

Date	Receipts			Issue			Balance		
	Qty	Rate(Rs)	Amt(Rs)	Qty	Rate(Rs)	Amt(Rs)	Qty	Rate(Rs)	Amt(Rs)
1-1-09							-	-	-
2-1-09	300	4	1200				300	4	1200
7-1-09				200	4	800	100	4	400
16-1-09	500	6	3000				600	5.667*	3400
18-1-09				400	5.667	2000	200	5.667	1133
23-1-09	450	5	2250				650	5.2**	3380
29-1-09				100	5.2	520	550	5.2	2860

Weighted average method:

*issue on 18-1-09 → (3400/600=5.667)

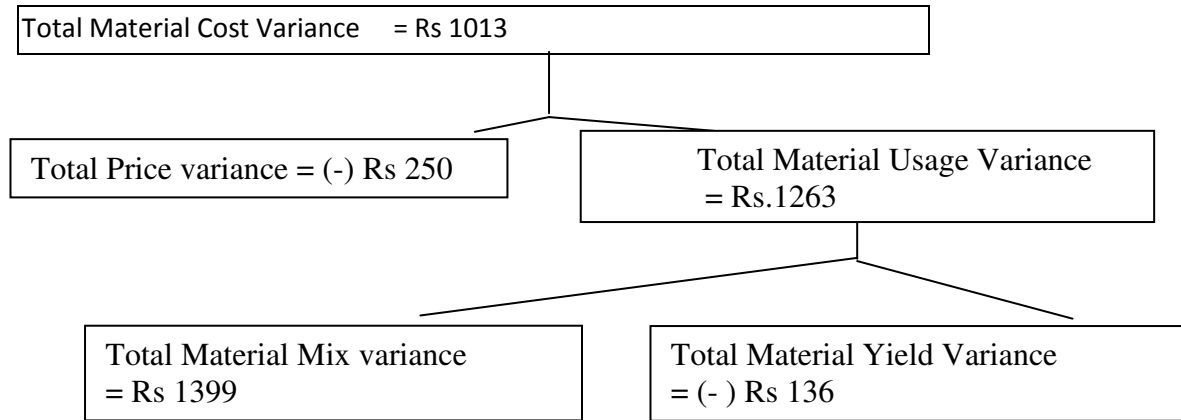
**issue on 29-1-09 → (1133+2250)/650=5.2



Annexure VII

Illustration of material cost variance (price, use, mix and yield)

Examples of material cost variance (price, use, mix and Yield):						
Material 'A' and 'B' are mixed in the proportion of 60% and 40% respectively and a standard loss of 5% is fixed. Standard and actual cost for a period is as under:						
Item	Standard Cost			Actual Cost		
	Qty (KG)	Rate per unit	Total	Qty (KG)	Rate per unit	Total
Material A	6000	6.00	36000	5000	6.50	32500
Material B	4000	4.00	16000	4500	3.50	15750
Total	10000	5.20	52000	9500	5.08	48260
Loss 5%	500					
Output	9500			9000		
Variances calculation:						
Material price variance : Actual qty(Standard Price –Actual price)						(Rs.)
Material A :5000x(6.00-6.50) =2,500					(Adverse)	(2500)
Material B 4500x(4.00-3.50) = 2250					Favourable	<u>2250</u>
					Total	<u>(250)</u>
Material Usage variance: (Actual production x standard material per unit – actual material)x standard price per unit						
{(9000x0.6)/0.95 – 5000} x Rs 6.00 = 4105					Favourable	4105
{9000x.0.4)/0.95 - 4500} x Rs 4.00 = 2842					Adverse	<u>(2842)</u>
					Total	1263
Material Mix Variance (Actual quantity of material – quantity of material based on total material quantity split in standard proportion)x (weighted average cost per unit (Kg) – standard cost per unit(Kg))						
A(5000 – 5700) x (5.079 – 6.00) = 644						644
B((4500 -3800) x (5.079 - 4.00) = 755						<u>755</u>
						<u>1399</u>
Material Yield Variance Standard material quantity allowed for actual output – actual material quantity input)x standard weighted average cost per unit (Kg)						
(9000/0.95 - 9500) x 5.08 = (136)						(136)



**Annexure VIII a***Illustration of presentation of material cost – Engineering Industry*

S.No.	Description	Unit	Qty	Rate	Amount
A	Direct Material			Rs	Rs
1.	Sheet	Kg.	10	200	2000
2.	Bought out components				
2(a)	Imported				
	Crank shaft	No.	1	6900	6900
	Cylinder block	No	1	12500	12500
	Hydraulic lift valve	No.	1	7200	7200
	Wheel Assembly Rear	No.	2	3230	6460
2b)	Indigenous				
	Injection pump	No.	1	18500	18500
	Tyres	No.	5	3000	15000
	Battery	No.	1	7500	7500
3	Others constituting less than 5% of the Total material cost				175000
4	Total				251060



Annexure VIII b

Illustration of presentation of material cost – Process Industry (Paper)

S.No.	Description	Unit	Qty	Rate	Amount
A	Direct Material – Raw material				
1.	Wood pulp (self manufactured)	MT	250	20000	5000000
2.	Imported pulp	MT	10	35000	350000
3.	Broke	MT	10	12000	120000
B	Process chemicals/additives				
1	Filler	MT	12	8500	102000
2	Sizing	MT	3	19000	57000
3	Alum	MT	10	9400	94000
4	Dyes Fluorescent	KG	13	150	1950
5	Other chemicals				105210
	Total				5830160



Annexure VIII c

Illustration of presentation of material cost – Caustic Soda
(Power used for electrolysis process is treated as part of material cost)

Sl. No.	Particulars	Unit	Quantity	Rate Rs./Unit	Amount (Rs.)
A	Materials consumed				
1	Direct Material				
	a) Purchased				
	- Indigenous Salt (Industrial Grade)	MT	997500	750	748125000
	- Imported	0	0	0	0
	b) Self Manufactured - Power consumed in electrolyser	KWH	15250000	5	76250000
	Total Direct Material				824375000
2	Process material				
	a) Barium Carbonate	KG	876600	19	16655400
	b) Sodium Sulphite	KG	94300	16	1508800
	c) Soda Ash	KG	42850	12	514200
	d) Alpha Cellulose	KG	6750	96	648000
	e) Flocculent	KG	1700	315	535500
	Total process material				19861900



Annexure IX

(CAS-6)

COST ACCOUNTING STANDARD ON MATERIAL COST

The following is the COST ACCOUNTING STANDARD 6 (CAS 6) issued by the Council of The Institute of Cost and Works Accountants of India on "MATERIAL COST". In this Standard, the standard portions have been set in **bold italic** type. This standard should be read in the context of the background material, which has been set in normal type.

1. Introduction

1.1 This standard deals with principles and methods of determining the Material Cost.

Material for the purpose of this standard includes raw materials, process materials, additives, manufactured / bought out components, sub-assemblies, accessories, semi finished goods, consumable stores, spares and other indirect materials. This standard does not deal with Packing Materials as a separate standard is being issued on the subject.

1.2 *This standard deals with the principles and methods of classification, measurement and assignment of material cost, for determination of the Cost of product or service, and the presentation and disclosure in cost statements.*

1.3 The Standard deals with the following issues.

- Principle of Valuation of receipt of materials.
- Principle of Valuation of issue of materials.
- Assignment of material cost to cost objects.

2. Objective

The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the material cost with reasonable accuracy.

3. Scope

This standard should be applied to cost statements which require classification, measurement, assignment, presentation and disclosure of material costs including those requiring attestation.

4. Definitions

The following terms are being used in this standard with the meaning specified.

4.1 Abnormal cost: *An unusual or atypical cost whose occurrence is usually irregular and unexpected and/ or due to some abnormal situation of the production or operation¹.*

¹ Adapted from CAS-1 Para 6.5.19



4.2 Administrative overheads: Expenses in the nature of indirect costs, incurred for general management of an organization².

4.3 Cost Object: This includes a product, service, cost centre, activity, sub-activity, project, contract, customer or distribution channel or any other unit in relation to which costs are ascertained.³

4.4 Defectives: End Product and/or intermediate product units that do not meet quality standards. This may include reworks or rejects.

4.4.1 Reworks: Defectives which can be brought up to the standards by putting in additional resources.

Rework includes repairs, reconditioning and refurbishing.

4.4.2 Rejects: Defectives which cannot meet the quality standards even after putting in additional resources.

Rejects may be disposed off as waste or sold for salvage value or recycled in the production process.

4.5 Imputed Costs: Hypothetical or notional costs, not involving cash outlay, computed only for the purpose of the decision making⁴.

4.6 Materials:

4.6.1 Direct Materials: Materials the costs of which can be attributed to a cost object in an economically feasible way⁵.

4.6.2 Indirect Materials: Materials, the costs of which cannot be directly attributed to a particular cost object⁶.

4.7 Material Cost: The cost of material of any nature used for the purpose of production of a product or a service⁷.

4.8 Production overheads: Indirect costs involved in the production process or in rendering service⁸.

The terms Production Overheads, Factory Overheads, Works Overheads and Manufacturing Overheads denote the same meaning and are used interchangeably.

4.9 Scrap: Discarded material having some value in few cases and which is usually either disposed of without further treatment (other than reclamation and handling) or reintroduced into the production process in place of raw material⁹.

² Adapted from CAS-1 Para 6.3.5

³ Adapted from CIMA Terminology

⁴ CAS 1- Para 6.5.13

⁵ Adapted from CAS 1-6.2.3

⁶ Adapted from CAS 1- 6.2.8

⁷ CAS-1-6.1.2

⁸ Adapted from CAS-1 Para 6.3.3 and 6.3.4

⁹ Adapted from Glossary of Management Accounting Terms- Page 62



4.10 Standard Cost: A predetermined norm applied as a scale of reference for assessing actual cost, whether these are more or less.

The standard cost serves as a basis of cost control and as a measure of productive efficiency when ultimately posed with an actual cost. It provides management with a medium by which the effectiveness of current results is measured and responsibility for deviation is placed.¹⁰ Standard costs are used to compare the actual costs with the standard cost with a view to determine the variances, if any, and analyse the causes of variances and take proper measure to control them.

4.11 Waste and spoilage:

4.11.1 Waste: Material loss during production or storage due to various factors such as evaporation, chemical reaction, contamination, unrecoverable residue, shrinkage, etc., and discarded material which may or may not have value¹¹.

4.11.2 Spoilage: Production that does not meet with dimensional or quality standards in such a way that it cannot be rectified economically and is sold for a disposal value. Net Spoilage is the difference between costs accumulated up to the point of rejection and the salvage value.

5. Principles of Measurement

5.1. Principle of valuation of receipt of materials:

5.1.1 The material receipt should be valued at purchase price including duties and taxes, freight inwards, insurance, and other expenditure directly attributable to procurement (net of trade discounts, rebates, taxes and duties refundable or to be credited by the taxing authorities) that can be quantified with reasonable accuracy at the time of acquisition.

Examples of taxes and duties to be deducted from cost are cenvat credits, credit for countervailing customs duty, sales tax set off/ vat credits and other similar items of credit recovered/ recoverable.

5.1.2 Finance costs incurred in connection with the acquisition of materials shall not form part of material cost.

5.1.3 Self manufactured materials shall be valued including direct material cost, direct employee cost, direct expenses, factory overheads, share of administrative overheads relating to production but excluding share of other administrative overheads, finance cost and marketing overheads. In case of captive consumption, the valuation shall be in accordance with Cost Accounting Standard 4.

5.1.4 Spares which are specific to an item of equipment shall not be taken to inventory, but shall be capitalized with the cost of the specific equipment. Cost of capital spares and/or insurance spares, whether procured with the equipment or subsequently, shall be amortised over a period, not exceeding the useful life of the equipment.

¹⁰ Adapted from CAS 1_ Para 6.7.5

¹¹ Adopted from Glossary of Management Accounting Terms page 70



5.1.5 Normal loss or spoilage of material prior to reaching the factory or at places where the services are provided shall be absorbed in the cost of balance materials net of amounts recoverable from suppliers, insurers, carriers or recoveries from disposal.

5.1.6 Losses due to shrinkage or evaporation and gain due to elongation or absorption of moisture etc., before the material is received shall be absorbed in material cost to the extent they are normal, with corresponding adjustment in the quantity.

The adjustment for moisture will depend on whether dry weight is used for measurement.

5.1.7 The forex component of imported material cost shall be converted at the rate on the date of the transaction. Any subsequent change in the exchange rate till payment or otherwise shall not form part of the material cost.

Explanation: The date on which a transaction (whether for goods or services) is recognised in accounting in conformity with generally accepted accounting principles

5.1.8 Any demurrage or detention charges, or penalty levied by transport or other authorities shall not form part of the cost of materials.

5.1.9 Subsidy/Grant/Incentive and any such payment received/receivable with respect to any material shall be reduced from cost for ascertainment of the cost of the cost object to which such amounts are related.

5.2. Principle of valuation of issue of material

5.2.1 Issues shall be valued using appropriate assumptions on cost flow.

E.g. First In First Out, Last In First Out, Weighted Average Rate.

The method of valuation shall be followed on a consistent basis.

5.2.2 Where materials are accounted at standard cost, the price variances related to materials shall be treated as part of material cost.

5.2.3 Any abnormal cost shall be excluded from the material cost.

5.2.4 Wherever, material costs include transportation costs, determination of costs of transportation shall be governed by CAS 5 – Cost Accounting Standard on Determination of Average (Equalized) Cost of Transportation.

5.2.5 Material cost may include imputed costs not considered in financial accounts.

Such costs which are not recognized in financial accounts may be determined by imputing a cost to the usage or by measuring the benefit from an alternate use of the resource.

5.3 Self manufactured components and sub-assemblies shall be valued including direct material cost, direct employee cost, direct expenses, factory overheads, share of administrative overheads relating to production



but excluding share of other administrative overheads, finance cost and marketing overheads. In case of captive consumption, the valuation shall be in accordance with Cost Accounting Standard 4.

5.4 The material cost of normal scrap/ defectives which are rejects shall be included in the material cost of goods manufactured. The material cost of actual scrap / defectives, not exceeding the normal shall be adjusted in the material cost of good production. Material Cost of abnormal scrap /defectives should not be included in material cost but treated as loss after giving credit to the realisable value of such scrap / defectives.

6. Assignment of costs

The basis of assignment of costs to the cost of product or service is dealt within this section.

6.1 Assignment of costs – Materials

6.1.1 Assignment of material costs to cost objects: Material costs shall be directly traced to a Cost object to the extent it is economically feasible and /or shall be assigned to the cost object on the basis of material quantity consumed or similar identifiable measure and valued as per the principles laid under Paragraph 5.

6.1.2 Where the material costs are not directly traceable to the cost object, these may be assigned on a suitable basis like technical estimates.

6.2 Assignment of costs – Direct Expenses

6.2.1 Where a material is processed or part manufactured by a third party according to specifications provided by the buyer, the processing/ manufacturing charges payable to the third party shall be treated as part of the material cost.

6.2.2 Wherever part of the manufacturing operations / activity is subcontracted, the subcontract charges related to materials shall be treated as direct expenses and assigned directly to the cost object.

6.3 Assignment of costs– Indirect materials

6.3.1 The cost of indirect materials shall be assigned to the various Cost objects based on a suitable basis such as actual usage or technical norms or a similar identifiable measure.

6.3.2 The cost of materials like catalysts, dies, tools, moulds, patterns etc, which are relatable to production over a period of time shall be amortized over the production units benefited by such cost.

6.3.3 The cost of indirect material with life exceeding one year shall be included in cost over the useful life of the material.

7. Presentation

Cost Statements governed by this standard, shall present material costs as detailed below:

7.1 Direct Materials shall be classified in the cost statement under suitable heads.

E.g.



- Raw materials,
- Components,
- Semi finished goods and
- Sub-assemblies

7.2 Direct Materials shall be classified as Purchased - indigenous, imported and self manufactured.

7.3 Indirect Materials shall be classified in the cost statement under suitable heads.

Indirect materials may be grouped under major heads like tools, stores and spares, machinery spares, jigs and fixtures, consumable stores, etc., if they are significant.

8. Disclosures

The following information should be disclosed in the cost statements dealing with determination of material cost.

8.1 Quantity and rates of major items of materials shall be disclosed. Major items are defined as those who form 5% of cost of materials.

8.2 The basis of valuation of materials shall be disclosed.

8.3 Any change in the cost accounting principles and methods applied for the determination of the material cost during the period covered by the cost statement which has a material effect on the cost of the material shall be disclosed. Where the effect of such change is not ascertainable wholly or partly, the fact shall be indicated.

8.4 Any abnormal cost excluded from the material cost shall be disclosed.

8.5 Any demurrage or detention charges, penalty levied by transport or other authorities excluded from the material cost shall be disclosed.

8.6 Any Subsidy/Grant/Incentive or any such payment reduced from material cost shall be disclosed.

8.7 Cost of Materials procured from related parties¹² shall be disclosed

8.8 Any cost imputed in arriving at the material cost shall be disclosed.

8.9 Disclosures shall be made only where significant, material and quantifiable.

8.10 Disclosures may be made in the body of the Cost statement or as a footnote or as a separate schedule.

¹² Related party as per the applicable legal requirements relating to the cost statement as on the date of statements